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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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ARNOLD & PORTER LLP ATTN: IP DOCKETING DEPT. 555 TWELFTH STREET, N.W. WASHINGTON, DC 20004-1206				YANG, CLARA I
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/784,897	DE JONGH, RONALD ANTON
	Examiner	Art Unit
	Clara Yang	2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 24 February 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) _____ is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 24 February 2004 is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement filed 2 September 2004 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language, specifically FR 2 622 322 A1. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Objections

3. Claims 1 and 22 are objected to because of the following informalities:
 - Claim 1 - Change "selecting, by the user" to "selecting, by a user" since "the user" lacks antecedent basis.
 - Claim 22 - Change "wherein the value of the variable are" to "wherein the value of the variables is" or "wherein the values of the variables are."

Appropriate correction is required.

4. Claim 27 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Claim 27 calls for at least two variables associated with each key, which is already called for in claim 24 ("each individual key having at least two variables associated therewith"). Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 2, 7, and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 2, the limitation "wherein the predetermined number of characters assigned to each variable" lacks antecedent basis. Because claim 1 calls for "a predetermined number of keys" and "associating at least two variables with each individual key," the examiner considers claim 2 to mean "wherein the at least two variables associated with each key are alphanumeric characters."

Regarding claim 7, the limitation "wherein the predetermined number of characters" lacks antecedent basis; hence it is unclear what the claim is requiring. Because claim 1 calls for "a predetermined number of keys," the examiner considers claim 7 to mean "wherein the predetermined number of keys are generated by a predetermined sequence."

Regarding claim 19, the limitation "one combination" lack antecedent basis. In addition, it is unclear what the combination comprises. Because claim 18 calls for "a predetermined random sequence of combination of values," the examiner considers claim 19 to depend on 18 and mean "one combination of values is selected and displayed for each user."

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 21 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Baker (US 5,428,349).

Referring to claim 21, Baker, as shown in Figs. 2 and 3, teaches a keypad comprising (a) a plurality of buttons 7 used by a user to input a password (see Col. 2, lines 57-68 and Col. 3, lines 1-8) and (b) a plurality of characters associated with each button 7, wherein the plurality of characters represent individual elements of the password (see Col. 2, lines 57-68 and Col. 3, lines 1-8 and 32-44).

Referring to claim 22, Baker, as shown in Figs. 2 and 3, (a) provides a plurality of buttons 7 that are used to input a password (see Col. 2, lines 57-68 and Col. 3, lines 1-8) and (b) associated 6 variables with each button 7, wherein a user selects button 7 in accordance with the value of the variables (see Col. 2, lines 57-68 and Col. 3, lines 1-8). Baker teaches that the combinations (i.e., value) of the variables are determined from a predetermined set of alphanumeric combinations and randomly assigned upon use of the terminal and after each time a user inputs a character of the password (see Col. 3, lines 13-46).

9. Claims 21 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Patarin et al. (US 5,815,083).

Referring to claim 21, Patarin, as shown in Fig. 1, teaches a keyboard 1 of an automated teller machine that comprises (a) a plurality of keys 5 for a user to input confidential information (see Col. 3, lines 46-59 and Col. 4, lines 10-29) and (b) a plurality of characters associated with each key 5, wherein the plurality of characters represent individual elements of the confidential information (i.e., secret codeword) (see Col. 3, lines 60-67 and Col. 4, lines 1-29). For example, in Fig. 1, key 5 at the end of the second row of keyboard 1 is associated with “©” and “7.” The term “character” is defined as a “graphic symbol used in writing or printing” (see the 10th edition of *Merriam-Webster's Collegiate Dictionary*); thus symbols such as “©” or “⊕” are characters.

Referring to claim 22, as explained in the rejection of claim 21, Patarin, as shown in Fig. 1, (a) provides a plurality of keys 5 for a user to input confidential information (i.e., a secure code) (see Col. 3, lines 46-59 and Col. 4, lines 10-29) and (b) associates two variables with each key 5, wherein the value of the variables are determined from a predetermined set of combination and randomly assigned to each key 5 upon the use of the terminal (see Col. 3, lines 60-67 and Col. 4, lines 1-29).

10. Claim 12 is rejected under 35 U.S.C. 102(e) as being anticipated by Chasko et al. (US006715078).

Referring to claim 12, Chasko teaches a consumer transaction terminal (CTT) 10, as shown in Fig. 1A, having a protected personal identification number (PIN) entry area 102 that displays icons representing numbers and letters via flat panel touch screen 101 (see Col. 2, lines 48-62). PIN entry area 102 is a virtual keyboard, as shown in Fig. 1A, comprising (a) a predetermined number of keys for inputting a PIN (i.e., access code) (see Col. 2, lines 57-62 and Col. 5, lines 5-13) and (b) a predetermined number of variables associated with each icon (i.e.,

key), wherein the user selects an icon based on whether the variables correspond with some portion of the user's PIN (see Fig. 1A; Col. 2, lines 60-62; Col. 6, lines 7-12, 21-25, and 29-42). As an example, Chasko shows in Fig. 1A that one variable (e.g., "1") is associated with a first icon, four variables (e.g., "2, A, B, C," "3, D, E, F," etc.) are associated with the second through sixth, eighth, and ninth icons, five variables (e.g., "7, P, Q, R, S") are associated with the seventh icon, and one variable (e.g., "0") is associated with the tenth icon.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1-5, 7, 10, 11, 13-16, 20, 21, 23, 24, and 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chasko et al. (US 6,715,078).

Referring to claims 1, 2, and 13, Chasko teaches a method, as called for in claims 1 and 13, that comprises (a) flat panel touch screen 101 (i.e., a graphical user interface) displaying PIN entry area 102 formed by a predetermined number of icons representing numbers and letters (i.e., a predetermined number of keys), wherein PIN entry area 102 is used to input a PIN (i.e., secure access code) (see Col. 2, lines 48-62); and (b) a user selecting a icon (i.e., key) that corresponds to at least one of the variables (see Fig. 3, steps 302, 304, 308, 310, and 314; Col. 2, lines 60-62; Col. 6, lines 7-12, 21-25, and 35-42). As shown in Fig. 1A, Chasko's method also includes (c) associating at least one variable with each icon. Regarding claim 2, Chasko teaches associating alphanumeric characters to all the icons except the first and tenth icons. Though

Chasko fails to expressly teach associating at least two variables with each icon (as called for in claims 1 and 13), wherein the at least two variables are alphanumeric characters (as called for in claim 2), Chasko clearly shows associating as many as four variables (e.g., "7, P, Q, R, S") with one icon. In addition, Chasko teaches that PIN entry area 102's layout is predetermined during the programming design of the screen layout (see Col. 5, lines 3-9). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Chasko's PIN entry area 102 such that at least two variables are associated with each icon, wherein the variables are of alphanumeric characters, to make a user's PIN even less obvious to an observer, thereby improving the security of the system.

Regarding claims 3 and 14, as shown in Fig. 1A, Chasko's variables are numbers.

Regarding claims 4 and 15, as shown in Fig. 1A, Chasko's variables are letters.

Regarding claims 5 and 16, as shown in Fig. 1A and explained in the previous rejection of claims 1 and 13, Chasko teaches associating letters and numbers with each icon.

Regarding claim 7, Chasko teaches that PIN entry area 102 (i.e., the predetermined number of icons) is predetermined during the programming design of the screen layout (see Col. 5, lines 3-13). In other words, PIN entry area 102 is generated by a predetermined layout or sequence.

Regarding claims 10 and 20, Chasko teaches that a user selects icons that are associated with the variables that correspond to his/her PIN (see Col. 2, lines 60-62 and Col. 6, lines 7-12, 21-25, and 29-42).

Regarding claim 11, Chasko discloses that CTT 10 is used with automated teller machines (ATMs) and that CTT 10's microprocessor 130 processes a user's PIN and controls the content of the information displayed on flat panel touch screen 101 by using a standard ATM

operating system and application program (see Col. 1, lines 21-26 and 40-55; and Col. 5, lines 27-35). Though Chasko omits expressly teaching that a user has access to a plurality of electronic services upon successful verification of the PIN, standard ATM operating systems and application programs allow a user access to electronic services (such as cash withdrawals, funds transfer, and deposits) only if the user's PIN is valid to prevent unauthorized transactions.

Referring to claim 21, Chasko's PIN entry area 102 (i.e., keypad), as shown in Fig. 1A, comprises (a) a plurality of icons that a user selects to input information (see Col. 2, lines 48-62), and (b) at least one character associated with each icon, wherein the characters represent individual elements of a PIN (i.e., secret codeword) (see Col. 2, lines 60-62 and Col. 6, lines 7-12, 21-25, and 29-42). Though Chasko fails to expressly teach associating a plurality of characters with each icon, Chasko clearly shows associating as many as four characters (e.g., "7, P, Q, R, S") with one icon. In addition, Chasko teaches that PIN entry area 102's layout is predetermined during the programming design of the screen layout (see Col. 5, lines 3-9). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Chasko's PIN entry area 102 such that a plurality of characters are associated with each icon to make a user's PIN even less obvious to an observer, thereby improving the security of the system.

Referring to claim 23, Chasko's CTT 10 includes flat panel touch screen 101 (i.e., a graphical user interface) displaying PIN entry area 102 formed by seven icons that each have at least three variables associated therewith (see Fig. 1A and Col. 2, lines 48-62). The variables are assigned from a group of possible combinations of letters and numbers and associated with each icon such that a user to gain the right to perform transactions by selecting the icons that correspond to his/her PIN (see Fig. 1A; Col. 1, lines 21-26; Col. 5, lines 3-13 and 27-35; Col. 6,

lines 7-12, 21-25, and 29-42). Though Chasko teaches seven icons having at least three variables associated therewith instead of five icons, Chasko discloses that PIN entry area 102 is determined during the programming design on the screen layout (see Col. 5, lines 3-9). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Chasko's PIN entry area 102 such that it displays five instead of seven icons having at least three variables associated therewith because (1) such modification is a design choice and has no effect on the functionality of Chasko's invention, and (2) the reduction of icons simplifies the programming of PIN entry area 102.

Referring to claims 24, 27, and 30, Chasko's method comprises the steps of (a) inserting a bank-issued card into CTT 10's card slot 110 to execute a transaction (see Col. 1, lines 21-26 and 40-55; Col. 3, lines 2-5; Col. 4, lines 4-6; and Col. 5, lines 27-35); and (b) displaying PIN entry area 102 to a user (see Col. 2, lines 48-62). Because Chasko teaches that CTT 10's microprocessor 130 processes a user's PIN and controls the content of the information displayed on flat panel touch screen 101 by using a standard ATM operating system and application program (see Col. 1, lines 21-26 and 40-55; and Col. 5, lines 27-35), it is understood that a user enters his/her PIN upon seeing a PIN request displayed on flat panel touch screen 101. As shown in Fig. 1A, PIN entry area 102 includes a predetermined number of icons, each icon having at least one variable associated therewith. Though Chasko fails to expressly teach associating at least two variables with each icon (as called for in claims 24 and 27), wherein the at least two variables are alphanumeric characters (as called for in claim 30), Chasko clearly shows associating as many as four variables (e.g., "7, P, Q, R, S") with one icon. In addition, Chasko teaches that PIN entry area 102's layout is predetermined during the programming design of the screen layout (see Col. 5, lines 3-9). Therefore, it would have been obvious to one having ordinary skill in the art

at the time the invention was made to modify Chasko's PIN entry area 102 such that at least two variables are associated with each icon, wherein the variables are of alphanumeric characters, to make a user's PIN even less obvious to an observer, thereby improving the security of the system.

Regarding claim 25, Chasko's method includes the step of (a) determining which PIN entry area 102 to display to the user, wherein PIN entry area 102 is determined during the programming design of the screen layout (see Col. 5, lines 3-13). As explained in the previous rejections of claim 11, Chasko teaches that CTT 10's microprocessor 130 uses a standard ATM operating system and application program, wherein the ATM operating system and application program allow a user access to electronic services (such as cash withdrawals, funds transfer, and deposits) only if the user's PIN is valid to prevent unauthorized transactions; thus the authenticity of the card is verified prior to account access. Though Chasko's method does include the step of a user inserting a card into card slot 110 (see Col. 3, lines 2-4 and Col. 4, lines 4-6), Chasko omits expressly teaching the steps of transmitting the card information to a server. The examiner takes Official Notice that transmitting card information from an ATM to a server is well known. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Chasko's method such that the ATM transmits a user's card information to a server because such step eliminates each ATM having to store and maintain a large database of customer accounts and enables a bank centralized control of the system and database.

Regarding claim 26, Chasko's method, as shown in Fig. 3, further comprises (a) a user entering a PIN at steps 302, 304, 308, 310, 314, and 318 (see Col. 6, lines 7-35); and (b) cryptographic smart card 114 encrypting the PIN at step 320 (see Col. 6, lines 35-42). Although

Chasko omits expressly teaching that the user has access to a plurality of electronic services upon successful verification of the PIN, Chasko discloses that CTT 10 is used with ATMs and that CTT 10's microprocessor 130 processes a user's PIN and controls the content of the information displayed on flat panel touch screen 101 by using a standard ATM operating system and application program (see Col. 1, lines 21-26 and 40-55; and Col. 5, lines 27-35). Standard ATM operating systems and application programs allow a user access to electronic services (such as cash withdrawals, funds transfer, and deposits) only if the user's PIN is valid to prevent unauthorized transactions.

Regarding claim 28, as shown in Fig. 1A, Chasko's variables are numbers.

Regarding claim 29, as shown in Fig. 1A, Chasko's variables are letters.

13. Claims 6, 17, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chasko et al. (US 6,715,078) as applied to claims 1, 13, and 24 above, and further in view of Patarin et al. (US 5,815,083).

Regarding claims 6, 17, and 31, Chasko is silent on the variables being symbols (as called for in claims 6, 17, and 31).

In an analogous art, as explained in the previous rejection 35 USC 102(b) rejection of claims 21 and 22, Patarin teach using variables that are symbols and numbers.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Chasko's PIN entry area 102 and method as taught by Patarin because symbols provide a user additional flexibility when determining his/her PIN, which is advantageous if the user is dyslexic or has difficulty memorizing numbers.

14. Claims 8, 9, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chasko et al. (US 6,715,078) as applied to claims 7 and 13 above, and further in view of Maddalozzo, Jr. et al. (US 6,434,702).

Regarding claims 8, 9, 18, and 19, Chasko omits teaching (1) generating the variables in accordance with a predetermined random sequence of combination of values (as called for in claims 8 and 18) and (2) selecting and displaying one combination for each user (as called for in claims 9 and 19).

In an analogous art, Maddalozzo's method comprises (a) displaying keypad 102 (i.e., a virtual keyboard) via an ATM's touchscreen (i.e., graphical user interface), wherein keypad 102 has a predetermined number of keys for inputting an access code (see Col. 3, lines 13-34 and 61-67; and Col. 4, lines 1-29); (b) associating one variable with each key (see Figs. 1 and 2; and Col. 4, lines 1-29); and (c) selecting a key that corresponds to at least one of the variables based on the variable corresponding with a portion of a user's access code (see Col. 4, lines 1-67). Maddalozzo's method further includes (d) generating the variable in accordance with a predetermined random sequence (see Col. 3, lines 35-60 and Col. 4, lines 31-67) and (e) selecting and displaying one combination for each user (see Col. 3, lines 45-47 and Col. 4, lines 49-51 and 59-65).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Chasko's system and method as taught by Maddalozzo because the steps of (1) generating the variables in accordance with a predetermined random sequence of combination of values and (2) selecting and displaying one combination for each user change the physical utilization of the buttons (see Maddalozzo, Col. 3, lines 22-24), thereby

resulting in the even wear of the buttons, and prevent an observer from determining the actual PIN (see Maddalozzo, Col. 3, lines 24-34).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clara Yang whose telephone number is (571) 272-3062. The examiner can normally be reached on 9:00 AM - 7:30 PM, Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (571) 272-7308. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CY
14 June 2006


WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600